CROP YIELD PREDICTION USING DATA MINING

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ABSTRACT

The crop yield prediction can be defined as a supervised problem, such that for any given pre-defined forecast horizon, the model should predict the future yielders. For any given data associated with each consumer or subscriber of the system, the input includes data on past history of crop transaction for each subscriber, together with all personal and business information that is maintained by the business firm. In addition, the system needs to incorporate the training phase, where labels are provided in the form of a list of yielders together with the corresponding yield issues.   This paper outlines the crop issues and reasons for their yield with emphasis on the challenges the business firm faces over the product selling attributes. The research work focuses on need for adaptive and efficient computational learning algorithms which can work on large databases to achieve reasonably good prediction performance through cross-validation for the entire crop knowledge base[1]. Based on detailed work and analysis of existing research approaches it can be understood that the literature focuses primarily only on mechanisms to predict crop yield and do not support on decision making for agricultural commodity. Much research work has been invested towards approach of yield prediction and commodity selling in Agri-market. A significant advance has been made in this research work, but however few major drawbacks to be reported are:

- *Current research methods available do not provide adequate time for companies to identify and retain the predict yielders. There is a lack of time element in commodity yield prediction.*

- *Fails to acknowledge the expensive problem of misclassifying non-yielders as yielders.*

- *The complexity theory of identifying the chances of "partial yielders" from a business firm is the major issue.*

Even though crop growth is considered as a major factor being identified behind crop yield, the challenges and issues behind achieving consistent yield is debatable behind research phenomenon. Major research analysis adopts using crop demographic and crop growth data along with farm governing policies, regional issues and environmental aspects. It is proposed in this research work that the analysis adopts data gathered from crop yield supports in resolving conflicts and provides suggestions towards suggesting a suitable alternative for crop yield analysis and improving the predictive measures.

KEYWORDS: *Crop Yield, Data Mining*